

## Amendments to the Claims

Please cancel claims 1-34 without prejudice, and add new claims 35-68, as follows:

Claims 1-34 (cancelled).

Claim 35 (new). Apparatus for providing optical radiation, comprising a pump source for providing pump radiation, and a brightness converter, and wherein the brightness converter is defined by a length, and contains a substantially rigid region along at least a portion of the length.

Claim 36 (new). Apparatus according to claim 35 wherein the brightness converter comprises a core, a first cladding, and rare earth dopant, and is defined by a first end and a second end.

Claim 37 (new). Apparatus according to claim 36 wherein the brightness converter comprises a tapered region located between the first end and the second end, the apparatus further being defined by a cross-sectional area of the first end and a cross-sectional area of the second end, and further wherein the cross-sectional area of the first end is greater than the cross-sectional area of the second end, and the brightness converter is substantially rigid between the first end and the tapered region.

Claim 38 (new). Apparatus according to claim 35, and wherein the pump radiation is coupled from the pump source into the brightness converter using a coupling means.

1 Claim 39 (new). Apparatus according to claim 38 wherein the coupling means is  
2 a lens.

4 Claim 40 (new). Apparatus according to claim 36 wherein the apparatus  
5 comprises a first reflector for reflecting optical radiation emerging from the first end.

7 Claim 41 (new). Apparatus according to claim 40 and including a second  
8 reflector.

10 Claim 42 (new). Apparatus according to claim 35 wherein the pump source  
11 comprises at least one laser diode, at least one laser diode bar, at least one laser  
12 diode stack, or at least one laser diode mini-bar stack.

14 Claim 43 (new). Apparatus according to claim 35 wherein the pump source  
15 includes a solid-state laser, a gas laser, an arc lamp, or a flash lamp.

17 Claim 44 (new). Apparatus according to claim 35 wherein the apparatus  
18 comprises a plurality of the pump sources and a combining means for combining  
19 pump radiation emitted by the pump sources.

21 Claim 45 (new). Apparatus according to claim 44 wherein the combining means  
22 comprises a beam splitter, a reflector, a polarisation beam combiner, a beam shaper,  
23 a wavelength division multiplexer, or a plurality of optical fibres in optical contact  
24 along at least a portion of their length.

25 Claim 46 (new). Apparatus according to claim 35 wherein the brightness  
converter contains a plurality of cores.

1 Claim 47 (new). Apparatus according to claim 35 wherein the brightness  
2 converter contains a single core.

4 Claim 48 (new). Apparatus according to claim 35 wherein the brightness  
5 converter is circular.

7 Claim 49 (new). Apparatus according to claim 35 wherein the brightness  
8 converter is non-circular.

10 Claim 50 (new). Apparatus according to claim 35 wherein the brightness  
11 converter comprises a rare-earth dopant.

13 Claim 51 (new). Apparatus according to claim 50 wherein the rare earth dopant  
14 is selected from the group comprising Ytterbium, Erbium, Neodymium,  
15 Praseodymium, Thulium, Samarium, Holmium, Dysprosium, Erbium codoped with  
16 Ytterbium, or Neodymium codoped with Ytterbium.

18 Claim 52 (new). Apparatus according to claim 36 wherein the brightness  
19 converter comprises a second cladding.

21 Claim 53 (new). Apparatus according to claim 35 wherein the brightness  
22 converter is doped with neodymium or ytterbium, and the waveguide is doped with  
23 ytterbium, erbium, or erbium co-doped with ytterbium.

25 Claim 54 (new). Apparatus according to claim 35 comprising a waveguide that is  
pumped by the brightness converter.

1 Claim 55 (new). Apparatus according to claim 35 wherein the brightness  
2 converter is defined by a width, and wherein the width is in the range 0.1mm to  
3 100mm.

4  
5 Claim 56 (new). Apparatus according to claim 55 wherein the width is in the  
6 range 0.2mm to 25mm.

7  
8 Claim 57 (new). Apparatus according to claim 56 wherein the width is in the  
9 range 5mm to 15mm.

10  
11 Claim 58 (new). Apparatus according to claim 35 wherein the brightness  
12 converter is defined by a breadth, and wherein the breadth is in the range 0.1mm to  
13 100mm.

14  
15 Claim 59 (new). Apparatus according to claim 58 wherein the breadth is in the  
16 range 0.2mm to 25mm.

17  
18 Claim 60 (new). Apparatus according to claim 59 wherein the breadth is in the  
19 range 2mm to 15mm.

20  
21 Claim 61 (new). Apparatus according to claim 1 wherein the brightness converter  
22 is defined by a length, and wherein the length is in the range 1mm to 2000mm.

23  
24 Claim 62 (new). Apparatus according to claim 61 wherein the length is in the  
25 range 10mm to 200mm.

1 Claim 63 (new). Apparatus according to claim 62 wherein the length is in the  
2 range 10mm to 50mm.

4 Claim 64 (new). Apparatus according to claim 35 wherein the brightness  
5 converter is formed from an optical fibre preform.

7 Claim 65 (new). Apparatus according to claim 64 wherein the preform is made  
8 from silica, silicic, phosphate or phosphatic glass.

10 Claim 66 (new). Apparatus according to claim 64 wherein the preform defines  
11 longitudinally extended holes disposed therein.

13 Claim 67 (new). Apparatus according to claim 66 wherein the preform includes  
14 stress rods.

16 Claim 68 (new). Apparatus according to claim 35 and in the form of a laser, a Q-  
17 switched fibre laser, a master oscillator power amplifier, or a laser that contains a  
18 frequency converter.

20 (End of amendments.)